LISTING OF THE CLAIMS

1. (Currently amended) A method for predicting the risk of dental caries in a subject, said method comprising:

obtaining an unfractionated saliva sample from said subject;

contacting an aliquot of said saliva with two or more lectins under conditions that allow said two or more lectins to bind to two or more respective lectin-binding components of said saliva;

detecting the ~~amount~~ amounts of bound lectins; and

comparing the amounts of bound lectins to the respective amounts known to bind a saliva sample from a control subject, wherein the amounts of bound lectins are indicative of the risk of dental caries.

2. (Original) The method of claim 1, wherein said saliva sample is an unstimulated saliva sample.

3. (Previously presented) The method of claim 1, wherein the lectin-binding components are oligosaccharides.

4. (Previously presented) The method of claim 1, wherein the two or more lectins are selected from the group consisting of DSL (datura stramonium), ECL (erythrina cristagalli), PSA (pisum sativum), WGA (triticum vulgaris), UEA I (ulex europaeus), MAL I (maackia amurensis), MAA (maackia amurensis), PNA (arachis hypogaea), AAL (aleuria aurantia), LTL (lotus tetragonolobus), MAL II (maackia amurensis), JAC (Artocarpus integrifolia), LEL (lycopersicon esculentum), SNA (sambucus nigra), PTL I (psophocarpus tetrogonolobus), ACL (amaranthus caudatus), GSL II (griffonia simplicifolia), VVA (vicia villosa), BPL (bauhinia purpurea), WFL (wisteria floribunda), SJA (sophora japonica), MPL (maclura pomifera), GNL (galanthus nivalis), HHL (hippeastrum hybrid), CCA (canavalia ensiformis), NPL (narcissus pseudonarcissus), STL (solanum tuberosum), PHA-L (phaseolus vulgaris), PHA-E (phaseolus vulgaris), GSL I (griffonia simplicifolia), DBA (dolichos biflorus), HMA (homarus americanus),

EEA (euonymous europaeus), LPA (limulus polyphemus), and PTL II (psophocarpus tetrogonolobus).

5. (Canceled)

6. (Previously presented) The method of claim 4, wherein the two or more lectins include MAL I.

7. (Previously presented) The method of claim 1, wherein said two or more lectins are selected from the group consisting of AAL, LTL and UEA I.

8. (Previously presented) The method of claim 1, wherein said two or more lectins are selected from the group consisting of DSL, ECL, PSA, MAL I, PNA, AAL, LTL, MAL II, JAC, LEL, PTL I, GSL II, VVA, BPL, SJA, MPL, and CCA, and said subject is an adult.

9. (Previously presented) The method of claim 1, wherein said two or more lectins are selected from the group consisting of ACL, PNA, LTL, PSA, MAL II, MAA, STL, PTL I, LEL, DSL, ECL, AAL, VVA, GNL I, CCA, SNA, JAC, WFL, SJA, MAL I, and BPL, and said subject is a child.

10. – 14. (Canceled)

15. (Previously presented) The method of claim 1, wherein said contacting comprises:
applying a drop of said saliva to a matrix material; and
contacting the matrix with a solution containing said two or more lectins.

16. (Previously presented) The method of claim 1, wherein said two or more lectins are each coupled to a reporter selected from the group consisting of dyes, chemiluminescent compounds, enzymes, fluorescent compounds, biotin, haptens, radioluminescent compounds, and radioactive-labeled biomolecules.

17. – 25. (Canceled)

26. (Original) The method of claim 1, wherein said subject is a human.

27. – 28. (Canceled)

29. (Previously presented) The method of claim 1, wherein said dental caries is selected from the group consisting of adult dental caries, root caries, DFT, DMFT, DMFS, dfs, dft, dmft, dmfs, and dfs/t.

30. – 47. (Canceled)

48. (Previously presented) A method for preventing, or reducing the risk of, dental caries, comprising:

obtaining an unfractionated saliva sample from a subject;

contacting an aliquot of said saliva with two or more lectins under conditions that allow said two or more lectins to bind respectively to two or more lectin-binding components of said saliva;

detecting the amounts of bound lectins;

comparing the amounts of bound lectins to the respective amounts known to bind a saliva sample from a control subject, wherein the amounts are proportional to the risk of dental caries in said subject; and

administering a therapeutic reagent to said subject when the content of the components in said saliva are above or below the respective levels contained in a normal control.

49. (Previously presented) A kit for detecting dental caries, the kit comprising:

means for collecting a saliva sample;

means for measuring the amounts of two or more lectin-binding components in said sample; and

an oral fluid standard for comparing with the amounts of said components in said sample.

50. – 53. (Canceled)

54. (Previously presented) The kit of claim 49, wherein said dental caries is selected from the group consisting of adult dental caries, root caries, DFT, DMFT, DMFS, dfs, dft, dmft, dmfs, and dfs/t.

55. (Previously presented) The kit of claim 49, further comprising a matrix material, and wherein the kit is configured to detect each of the lectin-binding components by carrying out a Western blot analysis.

56. (Canceled)

57. (Currently Amended) The device of claim 60, wherein said sample receiving zone matrix material is selected from the group consisting of: nitrocellulose, cotton, polyester, rayon, nylon, polyethersulfone, polyvinylidene fluoride, and polyethylene.

58. (Previously presented) The device of claim 60, wherein said sample receiving and control zones are affixed to the top side of a semi-rigid support.

59. (Currently amended) The device of claim [[60]] 58, wherein the semi-rigid support comprises polypropylene, polyvinyl chloride, propylene, or polystyrene.

60. (Previously presented) An assay device for detecting the presence of two or more lectin-binding components in a saliva sample, said device comprising:

a sample receiving zone comprising a first matrix material and two or more lectins bound to said matrix material; and

a control zone comprising a second matrix material and having at least one control saliva sample of a known concentration.

61. (Previously presented) The method of claim 1, further comprising assessing the risk of said disease at a defined level.

62. (Previously presented) The method of claim 1, further comprising assessing the risk of said disease as high, medium, low, or very low.

63. (Previously presented) The method of claim 1, further comprising assessing the risk of future development of said disease in said subject.

64. (Previously presented) The method of claim 63, wherein said assessing comprises comparing the amount of binding to a regression analysis derived from a group of subjects expressing a range of disease severity.

65. (Previously presented) The method of claim 1, wherein said contacting and said detecting are part of a Western blot procedure.

66. (Previously presented) The method of claim 65, wherein said detecting comprises contacting a matrix with a visualizing stain.

67. (Previously presented) The method of claim 65, wherein said procedure comprises:
applying said two or more lectins to a surface of a matrix material; and
contacting the matrix material with said saliva sample under conditions that allow the lectin-binding component to bind to the two or more lectins.

68. (Previously presented) The method of claim 67, wherein said two or more lectins comprise a first set of lectins and a second set of lectins, said first and second sets of lectins being distinguishable from one another.

69. (Previously presented) The method of claim 15, further comprising applying a drop of saliva from a control subject to said matrix.

70. (Previously presented) The method of claim 15, wherein said contacting comprises: contacting the matrix with a mixture of a first set of lectins conjugated to a microparticle having a first color and a second set of lectins conjugated to a microparticle having a second color, wherein said first and second colors are distinguishable from one another.

71. (Previously presented) The method of claim 70, wherein said disease is dental caries, and said first set of lectins comprises one or more lectins that are positively correlated with one or more of DFS, DFT, DMFT, DMFS, dfs, dft, dmft, dmfs, and dfs/t, and said second set of lectins comprises one or more lectins that are respectively negatively correlated with DFS, DFT, DMFT, DMFS, dfs, dft, dmft, dmfs, and dfs/t.

72. (Previously presented) The method of claim 70, wherein said detecting comprises contacting said matrix material with a binding partner coupled to a reporter, wherein said binding partner specifically binds said lectin-binding component.

73. (Previously presented) The method of claim 72, wherein said binding partner is an antibody or a lectin.

74. (Previously presented) The method of claim 72, wherein said reporter is selected from the group consisting of dyes, chemiluminescent compounds, enzymes, fluorescent compounds, biotin, haptens, radioluminescent compounds, and radioactive-labeled biomolecules.

75. (Previously presented) The method of claim 1, wherein the two or more lectins are selected from the group consisting of JAC, ACL, AAL, UEA I, SNA, and MAL I.

76. (Previously presented) The method of claim 1, wherein the two or more lectins are selected from the group consisting of JAC, AAL, UEA I, SNA, MAL I, and MAA.